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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,771	10/12/2005	Erwin Janssen	NL 030390	2204
24737 7590 09/15/2008 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510				
EXAMINER				
YAARY, MICHAEL D				
ART UNIT		PAPER NUMBER		
2193				
MAIL DATE		DELIVERY MODE		
09/15/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/552,771

Applicant(s)

JANSSEN ET AL.

Examiner

MICHAEL YAARY

Art Unit

2193

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- _____ Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- _____ Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-14 are pending in the application.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-14 are rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter.
 - (i) Claims 1 and 5 are directed to an apparatus, a filtering device. However, the claimed limitations (metering device, weighted adder, controller) appear to be software per se as there is lacking any structural or hardware elements comprising these filtering components.
 - (ii) Claims 2-4 and 6-10 are rejected for similar reasons as discussed for their respective parent claims, as they fail to present any limitations that resolve the deficiencies of the claims from which they depend.

- (iii) Claims 11 and 13 are directed to method claims. However, both claims lack either 1) being tied to another statutory class (such as a particular apparatus) or 2) transforming underlying subject matter to a different state or thing (In re Bilski). Thus, the method claims are directed to non-statutory subject matter.
- (iv) Claims 12 and 14 are rejected for similar reasons as discussed for their respective parent claims, as they fail to present any limitations that resolve the deficiencies of the claims from which they depend.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-8 and 11-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Izakson et al. (hereafter Izakson)(US Pat. 4,207,543).

7. **As to claims 1 and 11**, Izakson discloses a method of performing adaptive filtering (abstract), comprising:

Receiving an input signal by and adaptive filter (filter 1 receiving input 3 of figure 1);

Receiving an output of at least one adaptive filter (column 4, lines 27-36),

Monitoring a characteristic of the output (column 4, lines 43-54), and

Forwarding a correction signal in a feedback loop to adjust the characteristic (column 4, lines 60-65 and column 7, line 65-column 8, line 68).

8. **As to claims 2 and 12**, Izakson discloses the at least one adaptive filter is a low-pass filter, and the characteristic amount of high frequency in the output and the correction signal raises or lowers the high frequency cut-off of the low-pass filter (column 1, line 49-column 2, line 2 and column 7, line 66-column 8, line 68).

9. **As to claims 3 and 6**, Izakson discloses the adjusted characteristic is applied to the input signal block-by-block (column 4, lines 27-65).

10. **As to claim 4**, Izakson discloses a signal processing unit including at least one input and at least one output; and the adaptive filtering device of claim 1 for each of the at least one inputs and at least one outputs (adaptive filtering network of figure 1).

11. **As to claims 5 and 13**, Izakson discloses a method of performing adaptive filtering (abstract), comprising:

Receiving outputs from at least two low-pass FIR filters and changing a weighting of each to produce filtered output data (column 4, lines 43-50);

Receiving at least one cut-off frequency, supplying the cut off frequency to at least one of the at least two low-pass FIR filters (column 2, line 53-column 3, line 17 and column 4, lines 27-36); and

Varying the weighting of each of the at least two-low pass FIR filters to switch between at least two low-pass FIR filters (column 4, lines 43-54 and column 7, line 66-column 8, line 68).

12. **As to claims 7 and 14**, Izakson discloses the method operates in a normal mode and a transition mode, wherein the normal mode, the method does not switch filter characteristics and the output is from only one of the at least two low-pass filters and in the transition mode, the method switches filter characteristics and the output is from more than one of the at least two low-pass FIR filters (column 3, lines 34-57).

13. **As to claim 8**, Izakson discloses the transition mode, the controller calculates new filter coefficients and loads the new filter coefficients into an unused low-pass FIR filter, enables the unused low-pass FIR filter, varies the weighting between at least one of the low-pass FIR filters currently being used and the unused low-pass FIR filter to switch there between, and disables the at least one of the low-pass FIR filters currently being used (column 4, lines 47-50 and column 6, lines 3-27).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izakson in view of Skidmore et al. (hereafter Skidmore)(US Pat. 7,299,251).

16. **As to claim 9**, Izakson does not disclose the controller calculates the new filter coefficients by calculating initial sine and cosine values using an approximation formula and calculating coefficients using a sine prediction filter.

However, Skidmore discloses controller calculates the new filter coefficients by calculating initial sine and cosine values using an approximation formula and calculating coefficients using a sine prediction filter (abstract; column 1, lines 37-65; column 7, lines 30-48).

17. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Izakson by calculating filter coefficients, as taught by Skidmore, for the benefit of reducing computational load and directly deriving filter weights.

18. **As to claim 10**, the combination of Izakson and Skidmore disclose the controller calculates coefficients using the sine prediction filter by applying a pre-calculated window function and normalizing the window for unity gain (Skidmore, column 29, lines 14-26).

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Pat. 3,889,108 – Adaptive low pass filter

US Pat. 4,539,526 – Adaptive signal weighting system

US Pat. 5,014,232 - Adaptive digital filter having non-recursive and recursive filter

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL YAARY whose telephone number is (571)270-1249. The examiner can normally be reached on Monday-Friday, 8:00 a.m - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis Bullock can be reached on (571) 272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. Y./
Examiner, Art Unit 2193

/Lewis A. Bullock, Jr./
Supervisory Patent Examiner, Art Unit 2193